

Important Points from Barbara on freezing worms

After receiving a stack of worms for freezing this evening that I probably can't freeze down, I think it might be prudent to bring up a few pointers with regards to this procedure.

(1) Numbers. Insufficient numbers of worms result in poor strain survivorship. Even the best strains that tolerate freezing/thawing quite well lose a percentage of viable worms in the process. Please don't give me plates with 10, 20 or even 50 worms on them and announce they are ready for me to freeze. The six to eight plate requirement will only give me 300 to 400 worms if I'm lucky. Numbers do matter.

(2) Starved plates are not those where you did not put a spot of food on them and expect the worms you subsequently place on them to further populate. Starved plates refer to those in which the worms have eaten up the entire spot of food you previously placed upon the plate. The worms at this point have just discovered the food source has disappeared and are still on the surface of the agar for the most part. Rinsing the worms off at this stage is the easiest and the cleanest. The goal is to freeze down accessible worms, without clumps of OP50.

(3) The best stage to freeze worms down is L1, fresh out of the egg or fresh out of the "baggie." Depending on the strain, I've had some success with dauers though this stage I feel is already stressed. Overall survivorship drops to about 50-60% of what I can get from L1s.

(4) Avoid messy "wet" plates. They form an air tight suction seal at the point where the top lid meets the bottom. As a result the worms asphyxiate. Dead and lifeless worms do not propagate. Please utilize "dry" plates to grow your worms.